

REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for indicating that claims 2 and 4 contain allowable subject matter.

Drawings

Applicant respectfully requests that the Examiner accept the drawings filed on October 14, 2003. Applicant submits that the drawings are formal.

Disposition of Claims

Claims 1-5 were pending in the present application. By way of this reply, claim 5 has been cancelled without prejudice or disclaimer. New claims 6 and 7 have been added by way of this reply. Thus, claims 1-4, 6, and 7 are now pending in the present application. Claims 1, 6, and 7 are independent. The remaining claims depend, directly or indirectly, from claim 1.

Claim Amendments

Independent claim 1 has been amended by way of this reply. No new matter has been added by way of these amendments, as support for these amendments may be found, for example, in the claims and paragraphs [0035]-[0038] of the Specification. Dependent claims 2-4 have been amended to be consistent with amendments made to claim 1 and to correct minor informalities. No new matter has been added by way of these amendments.

New Claims

New independent claims 6 and 7 have been added by way of this reply. New claims 6 and 7 have been added to rewrite claims 2 and 4, respectively, in independent form. No new matter has been added by way of these amendments. Claims 2 and 4 were indicated by the Examiner as being allowable. Accordingly, entry and allowance of new claims 6 and 7 is respectfully requested.

Objections

Claim 3 is objected to for having awkward grammar. By way of this reply, claim 3 has been amended to clearly recite that said selection unit selects a number of light-emitting diodes to be connected in said vehicular lamp by selectively switching one of said two light source blocks. Accordingly, withdrawal of this objection is respectfully requested.

Rejection(s) under 35 U.S.C § 112

Claims 5 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 5 has been cancelled in this reply. Thus, the rejection with respect to claim 5 is now moot. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C § 103*Claims 1 and 3*

Claims 1 and 3 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Application Publication No. 2001/0033503 in the name of Hamp *et al.* (hereinafter “Hamp”) in view of U.S. Patent Number 6,641,294 issued to Lefebvre (hereinafter “Lefebvre”). Independent claim 1 has been amended in this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

The present invention is directed to a lighting circuit for lighting a vehicular lamp. As seen with respect to Figure 1 of the Specification, a lighting circuit **102** in accordance with one embodiment of the present invention includes a plurality of light source blocks **58** (*see, e.g.*, Specification, paragraphs [0035]-[0038]). As seen with respect to Figures 2a-2c, each light source block **58** includes one or more light-emitting diodes **30** (*see, e.g.*, Specification, paragraphs [0035]-[0038]).

Further, a lighting circuit **102** in accordance with one embodiment of the present invention includes a light source selection unit **200** that is controlled externally (*e.g.*, by a high-beam switch **202a**). Light source selection unit **200** includes a PNP transistor **206**. When the external control is turned off, PNP transistor **206** is turned on, which causes switch **204** to be turned on. In this case, one of the light source blocks (*e.g.*, **58b**) is short-circuited by the activation of switch **204**, and does not operate (*see e.g.*, Specification, paragraphs [0024]-[0026]). Conversely, when the external control is turned on, PNP transistor **206** is turned off, which causes switch **204** to be turned off. Accordingly, in this case, the light source block **58b** that was short-circuited by the activation of switch **204** is no longer short-circuited, and operates

in conjunction with the other light source block (*e.g.*, **58a**). In other words, one or more light source blocks may be selected based on selection unit **200** and the operation of switch **204** (*see e.g.*, Specification, paragraphs [0027]-[0028]). Accordingly, one or more of the light source blocks **58** may be controlled by a single switching regulator **114**, simplifying and reducing the cost of a vehicular lamp (*see, e.g.*, Specification, paragraph [0032]).

Accordingly, amended independent claim 1 requires a lighting circuit for lighting a vehicular lamp comprising a plurality of light source blocks, each light source block comprising one or more light emitting diodes connected in series. Amended claim 1 additionally requires a selection unit operable to control a switch to select at least one of said plurality of light source blocks, thereby selecting a number of light-emitting diodes to be connected in said vehicular lamp based on an external instruction. Amended claim 1 additionally requires a switch operable not to flow a current through at least one of the plurality of light source blocks not selected according to the selection of said selection unit.

Hamp, in contrast to the present invention, fails to show or suggest a plurality of light source blocks comprising one or more light emitting diodes connected in series. In contrast to the present invention, Hamp is directed to a battery-powered DC-DC converter that is used as a constant current source to drive an LED load for a device such as a flashlight (*see* Hamp, Abstract). It would be clear to one skilled in the art that the LED stack **8** of Hamp is designed for a user to manually toggling LEDs **CR2-CR9**. Hamp is completely silent to any method of switching other than directly toggling one or more LEDs with a switch (*e.g.*, **SW1** of Figure 1).

Hamp additionally fails to show or suggest a selection unit to control a switch to select at least one of the plurality of light source blocks, thereby selecting a number of light-emitting diodes to be connected in the vehicular lamp, based on an external instruction, as required by the claimed invention. Further, Hamp fails to show or suggest a switch as required

by the claimed invention. The Examiner asserts that Hamp discloses a selection unit operable to select a number of LEDs based on an instruction from outside. However, as seen in Figure 1 of Hamp, the purported selection unit of Hamp is merely a series of manually operated switches, each switch connected in parallel to an LED, that are toggled by a user. Hamp clearly teaches that each switch controls a particular LED (*see* Hamp, Fig. 1, paragraph [0009]). Hamp is completely silent with respect to a selection unit that controls a switch to select at least one of a plurality of light source blocks, as required by the claimed invention. Hamp is further silent with respect to a switch operable not to flow a current through at least one of the light source blocks not selected according to the selection of said selection unit.

Lefebvre, like Hamp, fails to show or suggest a selection unit operable to control a switch to select at least one of said plurality of light source blocks, thereby selecting a number of light-emitting diodes to be connected in said vehicular lamp based on an external instruction. Additionally, Lefebvre fails to show or suggest a switch operable not to flow a current through at least one of the light source blocks not selected according to the selection of said selection unit.

Lefebvre is directed to a lighting assembly 10 for illuminating a vehicle interior (*see* Lefebvre, Figures 1-3, Abstract). Like Hamp, Lefebvre merely shows that LEDs may be toggled directly by a switch (*e.g.*, switch 48 of Figure 3). Lefebvre states that a switching device is attached to the lighting assembly (*see* Lefebvre, col. 2, lines 25-33). Clearly, Lefebvre does not contemplate any means of selecting specific LEDs in lighting assembly 10. Lefebvre is *completely silent* with respect to a selection unit, as required by the claimed invention, in lighting assembly 10. Lefebvre is additionally silent with respect to a switch operable not to flow a current through at least one of the light source blocks not selected according to the selection of said selection unit.

In view of the above, Hamp and Lefebvre, whether taken separately or in combination, fail to show or suggest the present invention as recited in amended independent claim 1. Thus, amended independent claim 1 is patentable over Hamp and Lefebvre. Dependent claim 3 is allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 5


Claim 5 is rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,304,464 issued to Jacobs (hereinafter "Jacobs") in view of Lefebvre. Claim 5 has been cancelled in this reply. Thus, this rejection is now moot. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places the present application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 02008/131001).

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Respectfully submitted,

By 

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